

Work Order ID 59000

Friday, May 21, 2010 8:49:46 AM



Page 1

Item ID: D2574

Accept



Setup Start



Revision ID:

Item Name: Saddle, Aft In 205

Stop



Start Date: 5/21/2010 Start Qty: 8.00

Required Date: 5/31/2010 Req'd Qty: 8.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: 10-5-21

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2574

Rev E

100

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Program Batch No. 59000 Double check by: *mm* ☐ 1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets ☐ 3-Machine Step No 3 per Folio FA051 and insp

10/06/09

12 0

110

0.00



CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

Conventional Milling Machine

Machine keyway as per dwg D2573 & D2574

mm 10/06/10

12 0

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

mm 10/06/10

12 0

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59000

Friday, May 21, 2010 8:49:46 AM



Page 2

Item ID: D2574

Accept



Setup Start



Revision ID:

Item Name: Saddle, Aft In 205

Stop



Start Date: 5/21/2010 Start Qty: 8.00



Cust Item ID:

Required Date: 5/31/2010 Req'd Qty: 8.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

SF 10/06/14



QC

Memo

0.00

12

0

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

12

0

10-6-14

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

START TIME: 10:45 AM FINISH TIME: 11:15 AM

OVEN TEMPERATURE: 320°F

→ 10/05/15

12

0

Powder Coating

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59000

Friday, May 21, 2010 8:49:46 AM



Page 3

Item ID: D2574

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle, Aft In 205

Start Date: 5/21/2010 Start Qty: 8.00



Cust Item ID:

Required Date: 5/31/2010 Req'd Qty: 8.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	QC3- Inspect Part Finish	0.00				12		BR 10-6-15	
QC Quality Control	Memo	0.00							
170 	Identify as per dwg & Stock Location: 434	0.00						10-6-15	(120) SP
Packaging Packaging	Memo	0.00							
180 	QC21- Final Inspection - Work Order Release	0.00							10/06/16 TJ
QC Quality Control	Memo	0.00							MF 10-6-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, May 21, 2010 8:49:51 AM

Page 1

Work Order ID: 59000



Parent Item: D2574

Parent Item Name: Saddle, Aft In 205

Start Date: 5/21/2010

Required Date: 5/31/2010

Comments: IPP Rev: I As Per RevE 06-01-27 JLM

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-005		Manufactured	No			110	Each	62.0000	1	8			



Saddle Billet



Location

Loc Qty

Loc Code

MAT46

62

46411

62

Blk #58676

12 DTP 10/06/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	59000
Description: Saddle, Aft Inboard	Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4		
A	0.438	0.443		.441	.441	.441	0.441		
B	1.745	1.755		1.747	1.747	1.747	1.750		
C	3.495	3.505		3.499	3.500	3.500	2.500		
D	1.745	1.755		1.747	1.747	1.747	1.750		
E	7.990	8.010		8.007	8.006	8.006	8.005		
F	0.490	0.510		.502	.499	.502	0.504		
G	0.257	0.262		.260	.262	.260	0.260		
H	0.375	0.380		.377	.377	.377	0.377		
I	0.490	0.510		.503	.502	.502	0.504		
J	1.174	1.184		1.178	1.178	1.178	1.179		
K	0.558	0.578		.570	.570	.570	0.570		
L	1.174	1.184		1.178	1.178	1.178	1.179		
M	1.365	1.375		1.370	1.370	1.371	1.370		
N	2.495	2.505		2.499	2.500	2.500	2.500		
O	4.119	4.129		4.122	4.122	4.122	4.124		
P	0.115	0.135		.130	.128	.128	0.130		
Q	0.115	0.135		.135	.135	.135	0.135		
R	0.240	0.260		.257	.254	.254	0.254		
S	0.115	0.135		.126	.127	.128	0.130		
T	0.178	0.198		.188	.188	.188	0.188		
U	3.210	3.250		3.226	3.227	3.227	3.230		
V	0.230	0.250		.240	.240	.242	0.238		
W	0.115	0.135		.135	.127	.127	0.128		
X	0.307	0.312		.309	.310	.310	0.310		
Y	0.760	0.765		.760	.760	.760	0.760		
Z	0.352	0.372		.362	.361	.361	0.362		
AA	0.470	0.530		.500	.500	.500	0.500		
AB	0.615	0.635		.630	.626	.627	0.627		
AC	0.053	0.073		.063	.063	.063	0.063		
AD	0.240	0.260	R-???	.250	.250	.250	0.248		
AE	1.500	1.520		1.515	1.510	1.512	1.512		
AF	0.115	0.135		.135	.135	.135	0.135		
AG	0.240	0.280		.266	.271	.260	0.260		
AH	0.240	0.260		.250	.250	.251	0.249		
AI	2.000	2.020		2.006	2.002	2.003	2.003		
AJ	0.023	0.043		.033	.033	.033	0.033		
Accept/Reject									

Measured by:	MM
Date:	10/06/10

Audited by:	RF
Date:	10/06/14

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	59000
Description: Saddle, Aft Inboard	Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	5	6	7	8		
A	0.438	0.443		0.441	0.441	0.441	0.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.004	8.004	8.004	8.004		
F	0.490	0.510		0.499	0.506	0.500	0.499		
G	0.257	0.262		0.260	0.260	0.260	0.260		
H	0.375	0.380		0.377	0.377	0.377	0.377		
I	0.490	0.510		0.503	0.503	0.504	0.502		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.569	0.569	0.570	0.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		0.127	0.127	0.127	0.127		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.256	0.256	0.256	0.256		
S	0.115	0.135		0.130	0.130	0.130	0.130		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.240	0.240	0.241	0.240		
W	0.115	0.135		0.129	0.129	0.128	0.130		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.762	0.762	0.762	0.762		
Z	0.352	0.372		0.363	0.363	0.363	0.363		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.628	0.628	0.628	0.628		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.247	0.246	0.246	0.246		
AE	1.500	1.520		1.510	1.511	1.511	1.512		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.275	0.275	0.275	0.275		
AH	0.240	0.260		0.250	0.250	0.251	0.250		
AI	2.000	2.020		2.002	2.003	2.003	2.003		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by:	DJP
Date:	10/06/12

Audited by:	RF
Date:	10/06/14

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order:	59000
Description: Saddle, Aft Inboard	Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	9	10	11	12		
A	0.438	0.443		0.441	0.441	0.441	0.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.004	8.004	8.004	8.004		
F	0.490	0.510		0.497	0.498	0.497	0.500		
G	0.257	0.262		0.260	0.260	0.260	0.260		
H	0.375	0.380		0.377	0.377	0.377	0.377		
I	0.490	0.510		0.505	0.503	0.503	0.501		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.571	0.569	0.569	0.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		0.128	0.127	0.127	0.128		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.255	0.255	0.255	0.257		
S	0.115	0.135		0.131	0.131	0.130	0.133		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.242	0.240	0.241	0.240		
W	0.115	0.135		0.130	0.130	0.131	0.130		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.762	0.762	0.762	0.762		
Z	0.352	0.372		0.362	0.362	0.362	362		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.627	0.627	0.627	0.627		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.242	0.244	0.243	0.246		
AE	1.500	1.520		1.513	1.512	1.512	1.513		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.275	0.275	0.275	0.275		
AH	0.240	0.260		0.252	0.251	0.250	0.251		
AI	2.000	2.020		2.004	2.003	2.003	2.004		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by:	DTJ
Date:	10/06/12

Audited by:	[Signature]
Date:	10/06/14





Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	[Signature]

SUBJECT: 11
WITHOUT NOTICE
WORK ORDER
NO. 59000

PS 10-5-21

05.12.06

MATERIAL: 7075-T7351 (QQ-A-250/12)
(REF DART SPEC. D6102-003)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- | | |
|---|--|
|  | ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010 |
|  | CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES) |
|  | CHAMFER 0.063 x 45° ALL AROUND |
|  | CHAMFER 0.033 x 45° (SEE DETAIL C) |

[illegible]

5-21

Q

R2.000^{+0.020}_{-0.000}

B

R0.50

R0.50

R0.063 (TYP)

0.125

0.625

0.362

0.000^{+0.005}_{-0.000}

0.125

130°

5.50

DETAIL C

0.760^{+0.005}_{-0.000}

2.050^{+0.005}_{-0.000}

Technical drawing of a mechanical part, likely a bracket or arm, showing dimensions and tolerances. The part has a curved profile with a flat top section. Key dimensions include: overall width 3.230 ± 0.020, top flat width 0.750, top flat thickness 0.240, and a reference height of 1.698. Radii are specified as R0.50 (typical), R0.125, R0.188 (typical around pocket), and R1.510. A note indicates "0.250 (TYP ALL RIDGES)". A section line A-A is shown at the bottom left.

SECTION A-A

DETAIL C
SCALE 2:1

VIEW B-B

60° 0.000

5

0

VIEW B-B

R0.66 (TYP)

R0.50 (TYP)

$\phi 0.438 \pm 0.005$
(TYP 4 PLACES)

0.500

1.750
 ± 0.005

3.500
 ± 0.005

1.750
 ± 0.005

8.000

E	05.07.13	ADD CHAMFER ON RIDGE NOTE 4
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE

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DART AEROSPACE LTD.

DESIGN DS	DRAWN BY PH		DART AEROSPACE LTD. HARRISBURY, ONTARIO, CANADA
CHECKED 	APPROVED 	DRAWING NO. D2574	REV. _____ SHEET 1 OF _____
DATE 05.07.13	TITLE INNER AFT SADDLE		SCALE 2:1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries